saved by automatically transitioning the equipment to the low energy mode, wherein the amount of time saved is determined based on the difference between the recorded length of time that the building equipment is operated and the simulated runtime.

20. The system of claim **19**, wherein the system further comprises a remote device comprising a processing circuit, wherein the processing circuit of the remote device is configured to:

receive, via a network, data indicating one or more heating outputs, one or more cooling outputs, and a zone temperature from the thermostat;

determine the simulated runtime by:

generating the thermal plant model for the building space and the HVAC equipment based on at least one ambient temperature (OAT) value, the at least one received zone temperature (ZNT) values, the one or more heating outputs, and the one or more cooling outputs; and

simulating the thermal plant model to determine the simulated runtime.

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